

PATENT ABSTRACTS OF JAPAN

(11)Publication number : **2000-156265**

(43)Date of publication of application : **06.06.2000**

(51)Int.Cl.

H01R 24/02

(21)Application number : **10-329685**

(71)Applicant : **SUMITOMO WIRING SYST LTD**

(22)Date of filing : **19.11.1998**

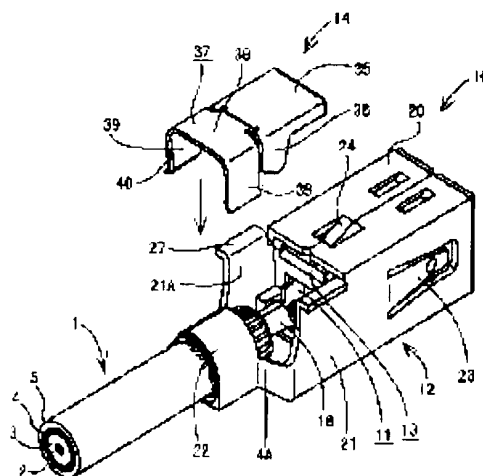
(72)Inventor : **AOYAMA MASAHIKO
SAITO MASAJI
KOIDE TAKASHI**

(54) SHIELDED TERMINAL

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a shielded terminal capable of improving the shielding characteristic.

SOLUTION: An internal terminal 11 is accommodated in a housing part 20 of an external terminal 12 through a dielectric 13. A core wire 2 of a shielded wire 1 is crimped to an internal crimping part 18 of the internal terminal at the outside of the external terminal 12, and then the internal terminal 11 is inserted into the dielectric 13. A braided with 4 is folded back on a terminal of a sheath 5, and an external crimped part 22 of the external terminal 12 is crimped to the folded back part 4A. A cover wall 21 opened at only its upper surface is mounted between the housing part 20 of the external terminal 12 and the external crimped part 22, and the neighborhood of the internal crimped part 18 is accommodated in the cover wall part 21. After completion of crimping, a shielding plate 14 is inserted into an opening 21A of the cover wall part 21, and is fixed by elastically holding the external crimped part 22 from the left and right sides with both holding pieces 39 of a clip part 37. The surrounding vicinity of a crimped part of the core wire 2 is covered with a conductive material from every direction.



LEGAL STATUS

[Date of request for examination] 23.02.2001

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number] 3365549

[Date of registration] 01.11.2002

[Number of appeal to first examination] 1

NOTICES

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention relates to the shield terminal connected to the terminal of a shield electric wire.

[0002]

[Description of the Prior Art] Drawing 6 and the thing shown in 7 are conventionally known as this kind of a shield terminal. This thing is equipped with the outside terminal c which makes the angle tubed which held the inside terminal a connected with a partner's terminal, and this inside terminal a in the state where Dielectric b was made to intervene. It is the structure which stuck by pressure the core-wire sticking-by-pressure section h prepared in the inside terminal a to the terminal of the core wire e in the shield electric wire d, and stuck by pressure the braided-wire sticking-by-pressure section i prepared in the outside terminal c, and the sheath sticking-by-pressure section j to the terminal of a braided wire f, and the terminal of Sheath g, respectively.

[0003]

[Problem(s) to be Solved by the Invention] By the way, in sticking the above-mentioned shield terminal by pressure with a sticking-by-pressure machine Three sticking by pressure, a core wire e, a braided wire f, and Sheath g, is performed simultaneously, among these, the core-wire sticking-by-pressure section h of the inside terminal a in the state where it held in the outside terminal c especially -- sticking by pressure -- in order to be stuck by pressure by making metal mold reach, it becomes indispensable to open **** k in vertical both sides of the outside terminal c In the portion which stuck the terminal of this e, i.e., a core wire, by pressure, it changed into the state where the vertical both sides were exposed through **** k, and there was a problem that shield performances, such as a radiation property, fell, this invention is completed based on the above situations, and the purpose is in the place which offers the shield terminal which can raise a shield property more.

[0004]

[Means for Solving the Problem] As a means for attaining the above-mentioned purpose, invention of a claim 1 The inside terminal which an insulating layer is made to intervene, allots a core wire and a braided wire to the same axle, is connected to the terminal of the shield electric wire which comes to cover a periphery with a sheath, and is connected to the aforementioned core wire by being stuck by pressure. In the shield terminal possessing the outside terminal which holds this inside terminal in the state where the dielectric was made to intervene, and is connected to the aforementioned braided wire It has the feature at the place which considered the surrounding open portion of the sticking-by-pressure section with the aforementioned core wire in the aforementioned inside terminal as the composition to which it can have a wrap cover member and this covered member can attach in the sticking-by-pressure section with the aforementioned braided wire in the aforementioned outside terminal.

[0005] While the aforementioned inside terminal is stuck by pressure in the exterior of the aforementioned outside terminal to the aforementioned core wire, invention of a claim 2 in a thing according to claim 1 for the aforementioned outside terminal The sticking-by-pressure section which sticks by pressure the aforementioned braided wire turned up on the aforementioned sheath with a sheath. The sticking-by-pressure section with the aforementioned core wire in the aforementioned inside terminal is prepared in the wrap covered wall section from the three way type, and it is formed in a tabular for the aforementioned covered member to plug up opening of the aforementioned covered wall section, and has the feature at the place which can be attached in the sticking-by-pressure section of the aforementioned outside terminal. Invention of a claim 3 has the feature in a thing according to claim 1 or 2 at the place currently formed in the shape of] to which the portion attached in the sticking-by-pressure section of the aforementioned outside terminal in the aforementioned covered member pinches the aforementioned sticking-by-pressure section of the inside terminal.

terminal, it can simplify attachment structure etc. and can be summarized to a small and simple thing

[0007] the metal mold for] that a -- invention of claim 2 -- shield terminal can be made small] sticking by pressure -- structure can be simplified -- in addition, the covered wall section of an outside terminal and the covered member of a tabular can do

performance can be raised more certainly

-invention of claim 3 - cover -- since the attachment section of a member was made into the shape of a clip, a covered member can be attached simply and firmly

[0008]

[Embodiments of the Invention] Hereafter, 1 operation gestalt of this invention is explained based on drawing 1 or drawing 5. With this operation gestalt, the shield terminal 10 by the side of a male is illustrated, and it is used, being stuck to the terminal of the shield electric wire 1 by pressure. The shield electric wire 1 is well-known structure, and as shown in drawing 1 and drawing 4, it is the structure where the sheaths 5, such as the core wire 2 which bundled two or more strands, an insulating layer 3, a braided wire 4, and a product made of rubber, were arranged on the same axle one by one from the inside. And with this operation gestalt, the braided wire 4 exposed by ***** (ing) the terminal of a sheath 5 is turned up on a sheath 5, and the exposed terminal of an insulating layer 3 is excised further, and terminal treatment is performed so that a core wire 2 may be exposed.

[0009] The shield terminal 10 is roughly divided, and as shown in drawing 1 and drawing 2, it is constituted by the inside terminal 11, the outside terminal 12, the dielectric 13, and the shield 14. The inside terminal 11 carries out bending of the metal plate which has conductivity, and is formed in the shape of a male terminal, and the tab section 16 connected with the inside terminal by the side of a partner's female (not shown), the **** salient 17 which eats into the wall when pressed fit in a dielectric 13, and the inside sticking-by-pressure section 18 for sticking the core wire 2 of the shield electric wire 1 by pressure are formed one by one from the nose-of-cam side. The inside sticking-by-pressure section 18 is equipped with piece of sticking by pressure 18A of a right-and-left couple, and is opening it up in the beginning.

[0010] The outside terminal 12 carries out bending of the metal plate which similarly has conductivity, and is formed, and the hold section 20 which makes angle tubed from a nose-of-cam side, the covered wall section 21 by which only the upper surface was opened wide, and the outside sticking-by-pressure section 22 which sticks clinch section 4A of the braided wire 4 in the shield electric wire 1 by pressure are formed one by one. While the metal lance 24 to the front stopped in the state stop escaping raises a dielectric 13 with the posture which turned to slanting back inside and being formed in the upper surface of the hold section 20, from the base, the stopper 25 which dashes the rear face of a dielectric 13 and regulates movement to back is stood (it is **** to drawing 3). In addition, the contact segment 26 which can contact is elastically formed in the side on either side with the outside terminal 12 by the side of a partner's female.

[0011] If the above-mentioned covered wall section 21 puts in another way, it is formed in the configuration which closed the three way type with the bottom wall and the wall on either side, and the inside sticking-by-pressure section 18 stuck to the core wire 2 of the shield electric wire 1 in the inside terminal 11 by pressure is located in it. The stabilizer 27 jutted out outside is formed from the upper limb of the side attachment wall of right and left of the covered wall section 21. The outside sticking-by-pressure section 22 is also equipped with piece of sticking by pressure 22A of a right-and-left couple, and, similarly is opening it up in the beginning.

[0012] A dielectric 13 is formed of insulating materials, such as synthetic resin, and functions as insulating electrically between the inside terminal 11 and the outside terminals 12, the hold which fitting of a dielectric 13 is enabled at the back end side in the hold section 20 in the outside terminal 12, and holds even the portion in which the tab section 16 of the inside terminal 11 was penetrated, and the **** salient 17 was formed from the root portion in the interior -- the hole 30 is drilled moreover, the stop to which the metal lance 24 of the outside terminal 12 gets into the upper surface -- while the hole 31 is formed, the contact section 32 which similarly runs against the stopper 25 of the outside terminal 12 is formed in the inferior surface of tongue

[0013] A shield 14 carries out bending of the metal plate which has conductivity, and is formed in the configuration as shown in drawing 4. In detail, it has the wrap cover section 35 for the between to the outside sticking-by-pressure section 22 stuck by pressure from opening 21A of the upper surface of the covered wall section 21 in the outside terminal 12 entirely. While the side edge of right and left of the covered section 35 serves also as a guide and being crooked downward for a while, as the posterior of the side attachment wall of right and left of the covered wall section 21 is covered, the suspension section 36 of a right-and-left couple is formed in the back end side.

[0014] The clip sections 37 are formed successively by the posterior of the above-mentioned covered section 35. Rather than the covered section 35, from the right-and-left edges on both sides of the substrate 38 located in the place gone up by one step, the piece 39 of pinching of a right-and-left couple bends this clip section 37 in the shape of suspension, and it is formed. The piece 39 of pinching of this right-and-left couple can pinch elastically the outside sticking-by-pressure section 22 possible and stuck [bent in the opening-and-closing direction, and] by pressure. In addition, the **** protruding line 40 which functions as the soffit of each piece 39 of pinching eating into the side edge before and behind the inside of each piece 39 of pinching at the superficies of the outside sticking-by-pressure section 22 while, as shown in drawing 4, the metal lance 24 is

core wire 2 of the shield electric wire 1, it is stuck to it by pressure. Next, a dielectric 13 is inserted from the front into the hold section 20 of the outside terminal 12, if the contact section 32 contacts a stopper 25 as it is pushed in a dielectric 13 bending and making it transform the metal lance 24 and is shown in drawing 3 -- the metal lance 24 -- restoration deformation

*** NOTICES ***

Japan Patent Office is not responsible for any damages caused by the use of this translation.

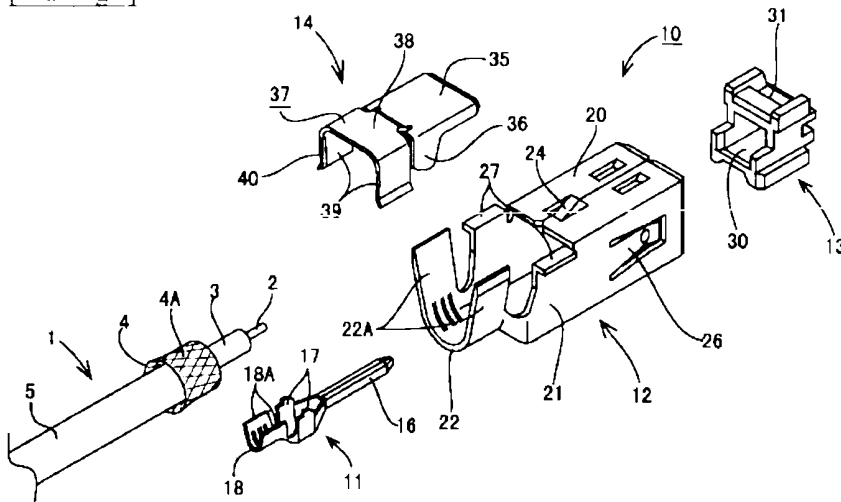
1. This document has been translated by computer. So the translation may not reflect the original precisely.

2. **** shows the word which can not be translated.

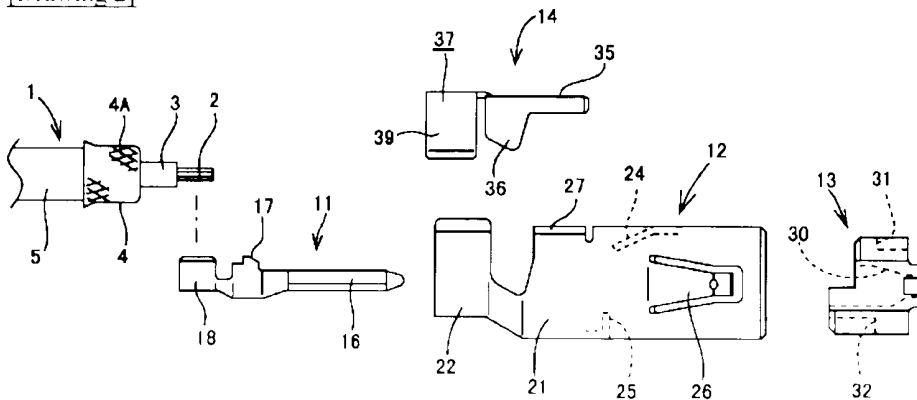
3. In the drawings, any words are not translated.

DRAWINGS

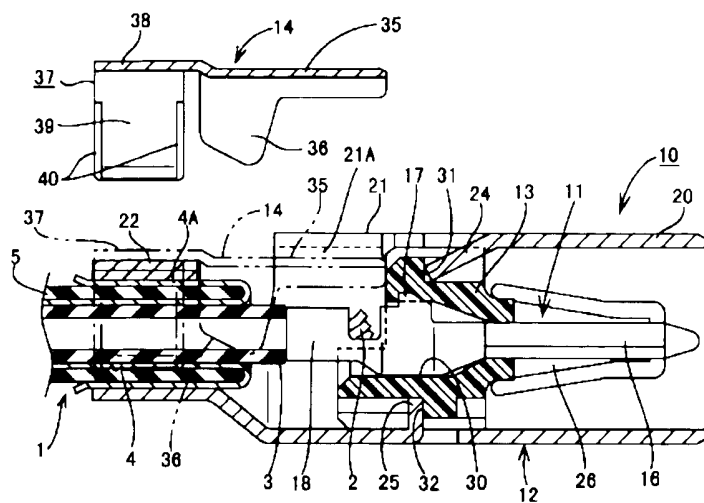
[Drawing 1]



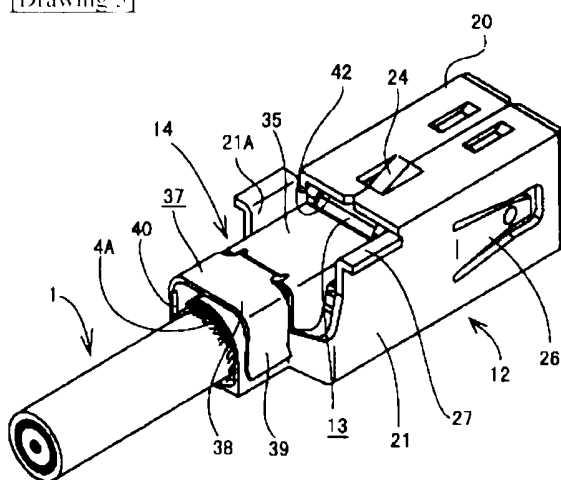
[Drawing 2]



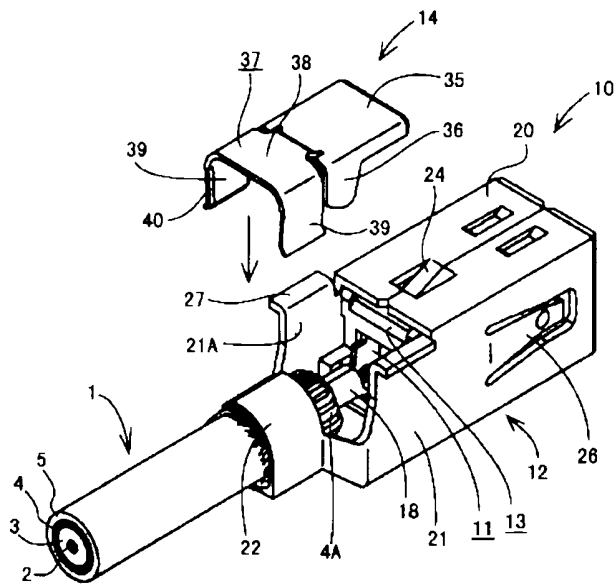
[Drawing 3]



[Drawing 5]

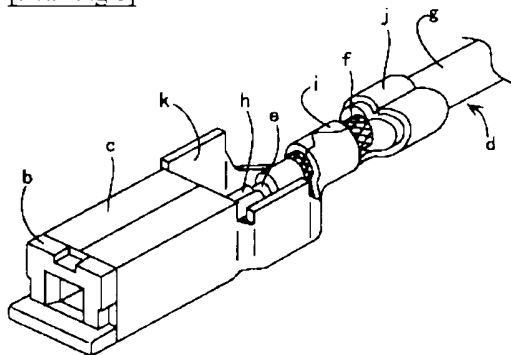


[Drawing 4]

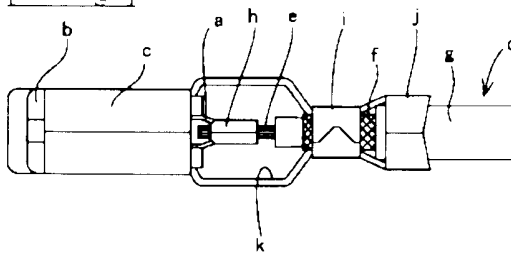


- | | |
|------------|------------------|
| 1...シールド電線 | 14...遮蔽板 |
| 2...芯線 | 18...内側圧着部 |
| 4...編組線 | 20...収容部 |
| 4A...折り返し部 | 21...覆壁部 |
| 5...シース | 21A...（覆壁部21の）開口 |
| 11...内側端子 | 22...外側圧着部 |
| 12...外側端子 | 37...クリップ部 |
| 13...誘電体 | 39...挟持片 |

[Drawing 6]



[Drawing 7]



* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The decomposition perspective diagram of 1 operation gestalt of this invention

[Drawing 2] The decomposition side elevation

[Drawing 3] Drawing of longitudinal section of the state before equipping with a shield

[Drawing 4] The perspective diagram

[Drawing 5] The perspective diagram in the state where it equipped with the shield

[Drawing 6] The perspective diagram of the conventional example

[Drawing 7] The plan

[Description of Notations]

1 -- Shield electric wire

2 -- Core wire

3 -- Insulating layer

4 -- Braided wire

4A -- Clinch section

5 -- Sheath

10 -- Shield terminal

11 -- Inside terminal

12 -- Outside terminal

13 -- Dielectric

14 -- Shield

18 -- Inside sticking-by-pressure section

20 -- Hold section

21 -- Covered wall section

21A -- (covered wall section 21) Opening

22 -- Outside sticking-by-pressure section

35 -- The covered section

37 -- Clip section

39 -- Piece of pinching

[Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

MEANS

[Means for Solving the Problem] As a means for attaining the above-mentioned purpose, invention of a claim 1 The inside terminal which an insulating layer is made to intervene, allots a core wire and a braided wire to the same axle, is connected to the terminal of the shield electric wire which comes to cover a periphery with a sheath, and is connected to the aforementioned core wire by being stuck by pressure. In the shield terminal possessing the outside terminal which holds this inside terminal in the state where the dielectric was made to intervene, and is connected to the aforementioned braided wire It has the feature at the place which considered the surrounding open portion of the sticking-by-pressure section with the aforementioned core wire in the aforementioned inside terminal as the composition to which it can have a wrap cover member and this covered member can attach in the sticking-by-pressure section with the aforementioned braided wire in the aforementioned outside terminal

[0005] While the aforementioned inside terminal is stuck by pressure in the exterior of the aforementioned outside terminal to the aforementioned core wire, invention of a claim 2 in a thing according to claim 1 for the aforementioned outside terminal The sticking-by-pressure section which sticks by pressure the aforementioned braided wire turned up on the aforementioned sheath with a sheath. The sticking-by-pressure section with the aforementioned core wire in the aforementioned inside terminal is prepared in the wrap covered wall section from the three way type, and it is formed in a tabular for the aforementioned covered member to plug up opening of the aforementioned covered wall section, and has the feature at the place which can be attached in the sticking-by-pressure section of the aforementioned outside terminal. Invention of a claim 3 has the feature in a thing according to claim 1 or 2 at the place currently formed in the shape of] to which the portion attached in the sticking-by-pressure section of the aforementioned outside terminal in the aforementioned covered member pinches the aforementioned sticking-by-pressure section elastically] a clip.

[Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] By the way, in sticking the above-mentioned shield terminal by pressure with a sticking-by-pressure machine. Three sticking by pressure, a core wire e, a braided wire f, and Sheath g, is performed simultaneously. among these, the core-wire sticking-by-pressure section h of the inside terminal a in the state where it held in the outside terminal c especially -- sticking by pressure -- in order to be stuck by pressure by making metal mold reach, it becomes indispensable to open **** k in vertical both sides of the outside terminal c. In the portion which stuck the terminal of this e, i.e., a core wire, by pressure, it changed into the state where the vertical both sides were exposed through **** k, and there was a problem that shield performances, such as a radiation property, fell. this invention is completed based on the above situations, and the purpose is in the place which offers the shield terminal which can raise a shield property more.

[Translation done.]

[0013] A shield 14 carries out bending of the metal plate which has conductivity, and is formed in the configuration as shown in Figure 4. In this case, the bending of the metal plate is carried out by the shield 14, and the bending of the metal plate is carried out by the shield 14.

sticking to the core wire 1, and the core wire 1 is stuck between the outside sticking 12 and the covered wall section 21, and the posterior part of the covered wall section 21 opened as shown in FIG. 10. The core wire 1 is stuck to the inside terminal 2 of the outside terminal 12, and the core wire 1 is stuck to the core wire 2 of the shield electric wire 3, where projected from the braided wire 4 and it is covered by the shield 14 as mentioned above according to this sticking. Since the surrounding portion of a core wire 1 is stuck by pressure portion of the outside terminal 12 with the covered wall section 21 of the outside terminal 12, the shield performance, such as a radiation property, is not degraded from the whole.

[0022] A shield 14 can do simply the shell and the attachment itself which was attached in the outside sticking-by-pressure section 22 of the outside terminal 12 by the clip section 37, and is settled in the overall length of the outside terminal 12, and an appearance, and can maintain the miniaturization of the shield terminal 10 whole. Moreover, by having adopted clip lock structure, a ground can be taken certainly. In addition, as shown in drawing 5, since it is allotted to the low position rather than the upper surface of the hold section 20 of the outside terminal 12, the covered section 35 of a shield 14 can be used as the stopped section which a state is made to stop stopped escaping from the trailing edge 42 of the upper surface of the hold section 20 to the resin lance in which it was prepared by the cavity, when the shield terminal 10 is held in the cavity of housing.

[0023] Within limits which it is not limited to the operation gestalt explained with the above-mentioned description and the drawing, and the following operation gestalten are also included in the technical range of this invention, for example, do not deviate from a summary further besides the following, an operation gestalt > this invention besides < can be changed variously, and can be carried out.

(1) this invention can be applied also to that by which vertical both sides of the portion which stuck by pressure the terminal of a core wire which was illustrated with the conventional technology are opened wide.

(2) Although the shield terminal by the side of a male was illustrated with the above-mentioned operation gestalt, this invention is applicable similarly about the shield terminal by the side of a female.

[Translation done.]

* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

PRIOR ART

[Description of the Prior Art] Drawing 6 and the thing shown in 7 are conventionally known as this kind of a shield terminal. This thing is equipped with the outside terminal c which makes the angle tubed which held the inside terminal a connected with a partner's terminal, and this inside terminal a in the state where Dielectric b was made to intervene. It is the structure which stuck by pressure the core-wire sticking-by-pressure section h prepared in the inside terminal a to the terminal of the core wire e in the shield electric wire d, and stuck by pressure the braided-wire sticking-by-pressure section i prepared in the outside terminal c, and the sheath sticking-by-pressure section j to the terminal of a braided wire f, and the terminal of Sheath g, respectively.

[Translation done.]

NOTICES

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

TECHNICAL FIELD

[The technical field to which invention belongs] this invention relates to the shield terminal connected to the terminal of a shield electric wire.

[Translation done.]